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Applicant: James Duncan Work

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Jennifer L. Stewart  
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Jennifer L. Stewart July 29, 2004  
Signature Date

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450.

**PETITION TO MAKE SPECIAL (37 CFR 1.102(d))**

Sir or Madam:

Applicants hereby petition to make this new application special. This application has not received any examination on the merits.

**(A) FEE**

Applicants hereby enclose a check in the amount of \$130.00 for the petition fee required by 37 C.F.R. § 1.17(h). Furthermore, the Commissioner is hereby authorized to charge payment of any fee due under 37 C.F.R. § 1.16 and § 1.17 associated with this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 or credit any overpayment to Deposit Account No. 02-2666.

**(B) CLAIMS**

Either (1) all pending claims in this application are directed to a single invention, or (2) if the Office determines that all the claims are not obviously directed to a single invention, applicants will make an election without traverse in response to notification

under the established telephone restriction practice.

### **(C) SEARCH**

A search for relevant prior art was made and the fields of search included:

U.S. patents and published applications in classes/subclasses:

705/9, 705/7, 705/8, 707/5, 707/6, 707/9, 707/10, 707/130, 707/104,  
709/206, 709/245.

publications; and

foreign patents and published applications.

### **(D) COPIES OF REFERENCES / INFORMATION DISCLOSURE STATEMENT**

Copies of the references were previously submitted with the Information Disclosure Statement. Applicants respectfully request that all references be considered and entered into the record of the present application.

The submission of the references is for the purpose of providing a complete record and is not a concession that the references listed therein are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

### **(E) DETAILED DISCUSSION OF THE REFERENCES**

A detailed discussion of the references deemed most closely related to the subject matter encompassed by the claims is provided below.

Each selected reference fails to anticipate the present invention as claimed. To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either

expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Furthermore, the selected references fail to establish a prima facie case of obviousness because the references, individually or in combination, neither teach nor suggest all the claim elements and limitations required by the patent application. Moreover, there is no motivation or suggestion in these references for their combination; and even assuming there were such motivation or suggestion, no combination of these references teaches or suggests the invention as claimed.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure: *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, it is submitted that all pending claims are distinguishable over the cited references, taken alone or in combination, and should be allowed.

#### **Claims 76, 86, 93, 102, 105, 113, 116, 117, 128 and 134 of the present application**

The present invention relates to Method and Apparatus for Internet-based Human Networking Brokering. The following are the independent claims of the present application:

76. A computer-implemented method, comprising reporting matches to search criteria according to whether or not a degree of connection between a searcher and a potential target is within a connection threshold.

86. A computer-implemented method, comprising reporting potential matches to search criteria so as to include information regarding degrees of connection between a searcher

to each individual represented by the potential matches, wherein the individuals represented by the potential matches are within a specified connection distance from the searcher.

93. A computer-implemented method, comprising integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such verification reports in reporting matches to search criteria established by a searcher, said matches being within a degree of connection between the searcher and an individual represented thereby.

102. A computer-implemented system comprising a software broker configured to report matches to search criteria established by a searcher, the matches representing individuals having personal profiles that satisfy one or more of the search criteria, the personal profiles having been established using contact and relationship management tools to enter contact information and describe relationships to those contacts, said tools provided by the computer-implemented system and further configured to organize said contacts into categories; said matches being reported if individuals represented thereby are within a contact threshold.

105. A computer-implemented method, comprising autonomously brokering connections between a searcher and a target so as to provide information regarding inter-personal connections between the searcher and the target according to access control instructions of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others.

113. A computer-implemented method, comprising autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, the search request having been developed by the searcher in response to one or more prompts suggesting amendments which may be made to the searcher's personal profile in order to achieve objectives stated by the

searcher in developing the search request.

116. A computer-implemented method, comprising autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding inter-personal connections between the searcher and the target according to access control instructions of the connecting entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others.

117. A computer-implemented method, comprising autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a connection path between the searcher and the target in response to a search request submitted by the searcher, *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold.*

128. A computer-implemented method, comprising autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user, each user profile having associated access control instructions which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile pertains.

134. A computer-implemented method, comprising integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such verification reports in reporting

matches to search criteria established by a searcher, said matches based in part on strengths of relationship in associated chains of connection between the searcher, potential targets and verifiers, if any.

**Bukow et al. US 6,567,784**

Bukow '784 describes a method and apparatus for matching projects and workers. The matching process occurs in two stages, whereby "in the first stage, the mandatory characteristics are considered. Only workers, or projects, meeting the mandatory characteristics are selected for further evaluation at the next stage. At the second stage, the quantitative characteristics are evaluated for the workers, or projects. The result is a subset of the total number of workers, or projects, matching the project criterion, or worker needs, ranked based on the quantitative characteristics" (Abstract).

The search criteria taught by Bukow'789 is clearly unconcerned with the following features of the present invention:

reporting matches to search criteria according to whether or not a *degree of connection* between a searcher and a potential target is *within a connection threshold*. (Claim 76)

reporting potential matches to search criteria so as to include information regarding *degrees of connection* between a searcher to each individual represented by the potential matches, wherein the individuals represented by the potential matches are *within a specified connection distance* from the searcher. (Claim 86)

said matches being *within a degree of connection* between the searcher and an individual represented thereby. (Claim 93)

said matches being reported if individuals represented thereby are *within a contact threshold*. (Claim 102)

autonomously brokering connections between a searcher and a target so as to provide information regarding *inter-personal connections* between the searcher

and the target according to *access control instructions* of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others. (Claim 105)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal *connection path* between the searcher and the target in response to a search request submitted by the searcher, the search request having been developed by the searcher in response to one or more prompts suggesting amendments which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request. (Claim 113)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a *connection path* between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding inter-personal connections between the searcher and the target according to access control instructions of the connecting entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others. (Claim 116)

autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a *connection path* between the searcher and the target in response to a search request submitted by the searcher; *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold.* (Claim 117)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a *connection path* between the searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user,

each user profile having associated access control instructions which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile pertains. (Claim 128)

integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such verification reports in reporting matches to search criteria established by a searcher, said matches based in part on *strengths of relationship* in associated chains of connection between the searcher, potential targets and verifiers, if any. (Claim 134)

Indeed, Bukow'789 fails to teach each and every element of the present invention. Consequently, all the present claims are distinctly patentable over Bukow'789.

#### **Weinreich et al. US 6,175,831**

Weinreich'831 discloses a "networking database containing a plurality of records for different individuals in which individuals are connected to one another in the database by defined relationships." (Abstract). Weinreich'831 further discusses using such a networking database to connect different individuals. In particular, "at step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. If the e-mail address is not found in database 70, step 1005A is executed notifying the user that the e-mail address is unknown. If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. If not, then step 1006A is executed informing the user. If, however, a connection is found, then step 1007 is called to determine whether the connection in step 1006 is only a "first degree" relationship. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A "second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3,



and the connection is made between USER1 and USER3 by the chain of two linked defined relationships. Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could monitor the number of relationships by degree number (first degree, second degree etc.) and notify the user, for example, via e-mail how his relationships have compiled over a period of time. If yes in step 1007, step 1007A is called to show the user the detail of the connection, for example, the first name, last name and how the user is connected to the person found in the search. If not, then 1007B is executed notifying the user” (Col. 22, lines 5-24)

Though Weinreich’831 teaches finding a person through inter-party relationship, he fails to teach or suggest that a match is only reported if the “degree of connection between a searcher and a potential target is within a connection threshold”. Indeed, Weinreich’831 reports a match, regardless of the distance of the relationship between the searcher and the target. Therefore, Weinreich’831 fails to teach each and every element of the present invention. This alone distinguishes the present invention from Weinreich’831.

In addition, Weinreich’831 fails to teach or suggest the following features in the present invention:

reporting matches to search criteria according to whether or not a degree of connection between a searcher and a potential target is *within a connection threshold*. (Claim 76)

reporting potential matches to search criteria so as to include information regarding degrees of connection between a searcher to each individual represented by the potential matches, wherein the individuals represented by the potential matches are *within a specified connection distance* from the searcher. (Claim 86)

said matches being *within a degree of connection* between the searcher and an individual represented thereby. (Claim 93)

said matches being reported if individuals represented thereby are *within a contact threshold*. (Claim 102)

autonomously brokering connections between a searcher and a target so as to provide information regarding inter-personal connections between the searcher and the target according to *access control instructions* of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others. (Claim 105)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, *the search request having been developed by the searcher in response to one or more prompts suggesting amendments* which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request. (Claim 113)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding inter-personal connections between the searcher and the target according to *access control instructions* of the connecting entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others. (Claim 116)

autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a connection path between the searcher and the target in response to a search request submitted by the searcher; *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold.* (Claim 117)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the

searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user, each user profile having associated *access control instructions* which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile pertains. (Claim 128)

integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such *verification reports in reporting matches to search criteria established by a searcher*, said matches based in part on strengths of relationship in associated chains of connection between the searcher, potential targets and verifiers, if any. (Claim 134)

Weinreich'831 clearly fails to teach each and every limitation of the present claims. Therefore, the present application is patentable over Weinreich'831.

#### **Gilmour et al. US 6,205,472**

Gilmour'472 describes a scheme for querying a user knowledge profile. In particular, "matching operation is performed between a document term within the electronic document and public knowledge terms within the public portion of each knowledge profile to identify a first set of targets for which a match exists between the document term and at least one public knowledge term. The first set of targets is published to the originator. Responsive to a second query from the originator, the private portion of a knowledge profile for each of the plurality of potential targets of the electronic document is accessed, the private portion of each knowledge profile including private knowledge terms indicative of a knowledge base of a potential target of the electronic document. A second matching operation between the document term within the electronic document and the private knowledge terms within the private portion of each knowledge profile is performed to identify a second set of targets for which a match exists between the document term and at least one private knowledge term. Each target of

the second set of targets is then prompted for authorization to be published to the originator” (Abstract).

Clearly, the query operation taught by Gilmore’472 uses a worker’s prior access to information of interest in a current electronic document. This is fundamentally different from the present invention wherein a match is reported if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134). In addition, Gilmour’472 fails to teach that (1) information is provided according to “access control instruction” (Claims 105, 116, 128) and (2) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Consequently, the current invention is patentable over Gilmore’472.

#### **Gilmour et al. US 6,115,709**

Gilmore’709 proposes a method of constructing a user knowledge profile having distinct public and private portions with different access restriction. In an automated knowledge management system, electronic documents are collected and each is associated with a user, such as the author of the document. Confidence levels are assigned to content within these documents and such content may be potentially indicative of a knowledge base of the user. The content is then stored in either the public or private portion of the user’s knowledge profile depending on whether the confidence level exceeds, or falls below, a predetermined threshold level. The public portion of the user knowledge profile is freely accessible by third parties, whereas the private portion has restricted access. Individual user’s knowledge profile may then be accessed to determine if a user is an appropriate candidate for a task (Abstract).

In addition, Gilmour’709 states that a “matching metric” for each user is included in the list of user names (1). Each “matching metric” comprises the sum of the confidence level values, each multiplied by the weighted occurrences of the term within the message body, for the terms identified by the list of term identifiers (2) and associated with the relevant user. This “matching metric” is indicative of the strength of the

recommendation by the knowledge access server 26 that the relevant user (i.e., potential recipient) be included within the list of confirmed addressees” (Col.23, lines 4-14).

The matching metric taught by Gilmour’709 is clearly unconcerned with reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134). This is a significant difference from the present invention.

In addition, Gilmour’709 fails to teach that (1) user’s information is provided according to “access control instruction” (Claims 105, 116, 128) and (2) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Therefore, Gilmour’709 fails to teach or suggest each and every element of the present claims and hence, the present claims are distinguished over Gilmour’709.

**Byoungcheon et al. “Secure Matchmaking Protocol”, Article, 2001, Information and Communications University, Korea**

Byoungcheon discusses a matchmaking protocol to find matched pairs in registered groups of participants depending on their choices, while preserving their privacy. In particular, the matchmaking protocol pairs two members only when they select each other. However, Byoungcheon does not disclose or teach the criteria for the selection process. Therefore, the present invention is patentable over Byoungcheon.

**Robert et al. “WebWatcher: A learning apprentice for the World Wide Web”, Article, March 19, 1997, School of Computer Science, Carnegie Mellon University.**

Robert proposes an information seeking agent for the World Wide Web. The agent “interactively helps users locate desired information by employing learned knowledge about which hyperlinks are likely to lead to the target information” (Abstract). This is achieved by (1) providing interactive advice to users while logging their

successful and unsuccessful searches as training data and (2) incorporating machine learning methods to automatically acquire knowledge for selecting an appropriate hyperlink given the current web page viewed by the user and the user's information goal (Abstract).

Robert therefore helps a user to search for the relevant information through learning the user's preference. This is significantly different from the current method of "autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, *the search request having been developed by the searcher in response to one or more prompts suggesting amendments* which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request" (Claim 113).

In addition, the matching metric taught by Robert is clearly unconcerned with reporting a match if the "degree of connection between a searcher and a potential target is within a connection threshold" (Claims 76, 86, 93, 102, 117, 134); and (2) user's information is provided according to "access control instruction" (Claims 105, 116, 128).

Consequently, the present claims are patentable over Robert.

**Keith et al. "Middle-Agents for the Internet", Article, 1997**

Keith teaches a spectrum of middle-agents that support the flow of information in electronic commerce, assisting in locating and connecting the ultimate information provider with the ultimate information requester. In particular, Keith describes three types of agents, a "blackboard is a middle-agent that keeps track of requests. Requesters post their problems; providers can then query the blackboard agent for events they are capable of handling. This class includes newsgroups and bulletin boards. A broker is a middle-agent that protects the privacy of both the requester and provider. The broker understands both the preferences and capabilities, and routes both requests and replies

appropriately. Neither the requester nor provider ever knows directly about the other in a transaction. A matchmaker/yellow-pages is a middle agent that stores capability advertisements that can be queried by requesters. The requesters then choose and contact any provider they wish directly” (Page 2, third paragraph).

The middle-agents taught by Keith fails to disclose the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Indisputably, Keith fails to teach each and every element of the present claims, and as such, the present invention is patentable over Keith.

#### **Keith et al. “Designing Behaviors for Information Agents”, Article, 1997**

Keith discusses the behavior and underlying architecture of WWW-based autonomous software agents that collect and supply information to users. The framework comprises “information monitoring” and “query answering” behavior. Information monitoring query is one that is “interpreted as expressing a condition that when true will trigger the transmission of a selected record of records” (Page 7, Col. 2, second paragraph). Query answering is one that is “simply applied to the agent’s infobase and the results returned to the query-initiator” (Page 7, Col. 1, third paragraph).

However, Keith fails to disclose the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Therefore, the present claims are patentable over Keith.

**Keith et al. “Matchmaking and Brokering”, Article, May 16, 1996, The Robotic Institute, Carnegie Mellon University, Pittsburgh, PA., USA**

In this paper, Keith defines the matchmaking and brokering behaviors that are used while processing requests among initially unacquainted sets of computational agents. Specifically, Keith teaches that “to construct the matchmaker query, we are developing an agent ontology. Agents in a server role advertise their services using this ontology (committing to certain future classes of action under specified conditions) and requesters can query such advertising assertions. The advertisement serves as a model of another agent’s general capabilities” (Page 6, Paragraph 2). He also defines how a broker processes a query, “the behaviors associated with advertisements are identical for brokers and matchmakers. Unlike real servers, however, when a broker accepts a request, it does nothing locally to process the request, but instead uses its internal matchmaking information to choose a server for the request. It then contacts the server and passes on the request and formulates an expectation to process the eventual reply” (Page 11, Paragraph 3).

As established above, the query procedure of Keith requires the agent to advertise its service based on an agent ontology. This is fundamentally different from the present invention which teaches (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Keith fails to teach each and every element of the present claims and consequently, the present claims are distinguishable over Keith.

**Keith et al. “Intelligent Adaptive Information Agents”, Article, 1996, Kluwer Academic Publishers, Boston, Manufactured in the Netherlands.**



Keith presents a multi-agent system infrastructure, “where multi-agents compartmentalize specialized task knowledge and coordinate among themselves to gather and filter information in response to user-initiated problem solving” (Page 2, Paragraph 1). The information request function is further illustrated in Figure 6. In particular, “in a matchmade organization, providers advertise their capabilities with a matchmaker. If those capabilities change, or the agent exits the open system, the provider unadvertises. A matchmaker stores these advertisements in a local database. A requester wishing to ask a query first formulates a meta-query asking for advertisements from agents that could respond to the query. This meta-query is asked of a matchmaker, which responds with a set of matching advertisements. The requester can then use its full preferences to choose a provider, and make its request directly to the chosen provider. Furthermore, if this type of query is asked often, then the requester can subscribe to update advertisements from a matchmaker, and keep a local cache of the current advertisements” (Page 17, Paragraph 2)

Clearly, the matchmaker system matches the requester to the provider based on the advertisement provided by the provider. However, Keith fails to teach or suggest the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86, 93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Therefore, the present claims are patentable over Keith.

**Tom et al. “Experience with a learning personal assistant”, Article, 1994, School of Computer Science, Carnegie Mellon University**

Tom discusses a calendar manager that learns user scheduling preferences from experience. The learning procedure involves the system “learning new rules for each meeting feature. Rules are prioritized in the system based on their performance over the training data and during subsequent use.” (Page 5, Table 2-2)

Tom's method is fundamentally different from the present invention which relates to a method and apparatus for Internet-based human networking brokering. This alone is sufficient to distinguish the present invention from Tom. Even if we were to consider the learning procedure taught by Tom, it still fails to teach or suggest the following feature of the present invention, "autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, the search request having been developed by the searcher *in response to one or more prompts suggesting amendments which may be made to the searcher's personal profile* in order to achieve objectives stated by the searcher in developing the search request" (Claim 113; emphasis added).

As Tom fails to teach each and every element of the present claims, the present claims are patentable over Tom.

**Upendra et al. "Social Information Filtering: Algorithm for Automating "Word of Mouth"", Article, 1995, MIT Media-Lab, Cambridge, MA.**

Upendra describes a technique for making personalized recommendations from any type of database to a user based on similarities between the interest profile of that user and those of other users. Four different algorithms are presented in the context of making personalized recommendations for music albums and artists. The Mean Squared Differences Algorithm measures the degree of dissimilarity between two user profiles. Prediction can then be made by considering all users with a dissimilarity to the user which is less than a certain threshold and computing a weighted average of the rating provided by those most similar users, where the weights are inversely proportional to the dissimilarity. The Personal Algorithm uses the standard *Pearson r* correlation coefficient to measure similarity between user profiles. In contrast to the previous algorithm, this algorithm makes use of negative correlations as well as positive correlations to make predictions. The Constrained Pearson r Algorithm first computes the correlation coefficient between the user and all other users. Then all users whose coefficient is

greater than a certain threshold are identified. Finally a weighted average of the ratings of those similar users is computed where the weight is proportional to the coefficient. The Artist-Artist Algorithm examines the artists that a user has already rated. It then weighs each one with respect to their degree of correlation with the new artist who is yet to be rated by the user.

Clearly, the algorithms taught by Upendra are significantly different from the current invention. Specifically, Upendra uses correlation coefficient to measure similarity between user profiles and fails to teach the present invention wherein a match is reported if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134). In addition, Upendra fails to disclose the following feature of the current invention: (1) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (2) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Upendra fails to teach each and every element of the present claims and as such, the present claims are patentable over Upendra.

#### **Anthony et al. “Capability-based Agent Matchmaking”, Article, USA**

Anthony presents an approach to agent capability description and matching. Basically, the method relies on shared, focused ontologies that provide a common vocabulary for describing information and services. An agent can then advertise itself in terms of the focused ontologies and query about other agents using the same ontologies (Abstract).

The method taught by Anthony is clearly different from the present invention. In particular, the present invention includes the following features not taught or disclosed by Anthony: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105,

116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Therefore, the present invention is patentable over Anthony.

**Adriana et al. “Agents to Assist in Finding Help”, Article, April 2000, Article, MIT Media Lab, Cambridge, MA; Adriana S.vivacqua “Agents for Expertise Location”, 1998, AAAI Spring Symposium on Intelligent Agents in Cyberspace, Stanford, CA.**

In these papers, Adriana describes a solution for helping a novice who has difficulty characterizing his own questions and expertise and finding appropriate experts. Basically, the solution includes an agent that automatically classifies both novice and expert knowledge by autonomously analyzing documents in the course of routine work. The agent is able to formulate the necessary question and match the expert to the novice. In particular, matching “is made by first finding similar topics in the domain model. The agent then goes on to contact other agents, computing a vector match between its user’s need and other users’ expertise. The agent returns a list of potential helpers” (Article, Page 69, Paragraph 2; AAI Spring Symposium, Page 3, Paragraph 3).

The matching approach taught by Adriana clearly fails to teach or suggest the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Indeed, Adriana is only concerned with providing a better match through accessing the right knowledge domain that was classified into novice level and expert level by the system.

Therefore, Adriana fails to teach each and every element of the present invention and the present invention is distinguished from Adriana.

**Foner et al. “Multi-agent Matchmaking”, Article, October 1996, BT Technology Journal, Vol.14, No.4; Forner. “A Multi-agent Referral System for Matchmaking”, Article, MIT Media Lab, Cambridge, MA, USA.**

In these papers, Foner describes a matchmaker system designed to find people with similar interests and introduce them to each other. In particular, the approach taken to justify if two matches are good enough is to acquire referrals. “Whether or not any matches were found that were good enough to justify entering them in a cluster cache, the next step is to acquire referrals to agents that might be better matches. In the example here, agent A asks agent B for the entire contents of its rumor cache, and runs the same sort of comparison on those contents that it did on agent B’s own local granules. Good matches are added to A’s cluster cache, the rest of the data is added to A’s rumor cache, and A’s namelist is updated by adding to it those other agents which showed good matches to A, that is, those agents which had granules that went into A’s cluster cache. These agents will be contacted next, after A finishes with B and any other entries in its name list. The various caches belonging to B that A has been consulting were gathered by B in a similar way; every agent participating in this protocol is thus building up a collection of data for its own use and for the use of other agents” (BT Technology Journal, Page 118, Section 2.4; MIT Media Lab Article, Page 255, Paragraph 5)

Though Foner teaches using referrals to justify a good match, he is unconcerned with the “degree of connection” between the source and the referrals. This is fundamentally different from the present invention wherein matches are reported if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86, 93, 102, 117, 134). This alone is sufficient to distinguish the present invention over Foner.

In addition, Foner fails to teach the following features of the present invention:

reporting matches to search criteria according to whether or not a degree of connection between a searcher and a potential target is *within a connection*

*threshold.* (Claim 76)

reporting potential matches to search criteria so as to include information regarding degrees of connection between a searcher to each individual represented by the potential matches, wherein the individuals represented by the potential matches are *within a specified connection distance* from the searcher. (Claim 86)

said matches being *within a degree of connection* between the searcher and an individual represented thereby. (Claim 93)

said matches being reported if individuals represented thereby are *within a contact threshold.* (Claim 102)

autonomously brokering connections between a searcher and a target so as to *provide information regarding inter-personal connections* between the searcher and the target according to *access control instructions* of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others. (Claim 105)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, *the search request having been developed by the searcher in response to one or more prompts suggesting amendments* which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request. (Claim 113)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding inter-personal connections between the searcher and the target according to *access control instructions* of the connecting

entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others. (Claim 116)

autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a connection path between the searcher and the target in response to a search request submitted by the searcher; *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold.* (Claim 117)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user, each user profile having associated *access control instructions* which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile pertains. (Claim 128)

integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such *verification reports in reporting matches to search criteria established by a searcher*, said matches based in part on strengths of relationship in associated chains of connection between the searcher, potential targets and verifiers, if any. (Claim 134)

Foner clearly fails to teach each and every limitation of the present claims. Therefore, the present claims are patentable over Foner.

**Daniel et al. “Issues and Extensions for Information Matchmaking Protocols”, 1996, International Journal of Cooperative Information Systems, Vol.5, Nos. 2&3, pgs 251-273, World Scientific Publishing, USA.**

Daniel presents a matchmaker which “serves as a central clearinghouse to which other agents can advertise their specific information capabilities, request pointers to providers of information, and ask to be kept informed of changes to classes of information” (Pg 254, Paragraph 1). In addition, Daniel states that the “actual matching of advertised and subscribed content fields is performed by a Prolog-like unification algorithm. Advertisements and requests must match based solely on their content; there is no knowledge base and no inference is performed” (Page 255, Paragraph 3).

Indeed, Daniel is only concerned with exact content matching. He further elaborates that “an advertisement containing the term “engine” would not match an isomorphic request containing the term “propulsion system”, since the matchmaker does not know that engines are a subclass of propulsion systems” (Page 255, Paragraph 3). This is significantly different from the present invention wherein a match is reported if “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134).

In addition, Daniel fails to teach the following features of the present invention: (1) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (2) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Therefore, Daniel fails to teach each and every element of the present claims, and the present claims are patentable over Daniel.

**Alexander I. Zelitchenko, “Information Retrieval Expert System “Matchmaker””, 1992, Computers in Human Behavior, Vol. 8, pgs 281-296, printed in USA, Moscow State University**



Alexander describes an information system used to “search for a potential matrimonial partner. *The search is based on comparison of the subject’s record, which consists of his/her answers to about 400 items of a specially designed questionnaire, with the records of the potential partners.* The basic principle of the system is representation of the set of candidates for the client with psychological warnings about potential “conflict zones” in relationships between client and candidate rather than a ranking of candidates based on hypothetical “psychological compatibility” indices” (Abstract, emphasis added)

Alexander discloses matching individuals based on their profile, with the profile of the target containing answers to a specially designed questionnaires. Indisputably, the profile matching system as taught by Alexander is significantly different from the present invention that uses the “connection” information between users. Therefore, the present invention is distinguished from Alexander.

**Evangelos et al., “A Note on Weighted Distributed Match-Making”, 1992, Math Systems Theory 25, pgs. 123-140.**

Evangelos presents a “success-stop version of distributed match-making that is analyzed in terms of a weight distribution that in all cases results in approximately having the (expected) number of messages required in the corresponding strategy that does not use these weights” (Abstract). The success-stop strategy queries “the nodes one node at a time and stop when the queried node is the one looked for” instead of “the querying node sends messages to all nodes to be queried at once” (Page 136, Paragraph 1).

Indeed, Evangelos is only concerned with the communication cost (the number of messages) involved in matching two resources in a network. This is fundamentally different from the current invention wherein matches are reported using the connection information between a search and a potential target. Therefore, the current invention is patentable over Evangelos.

**Rajesh et al., “Matchmaking: An Extensible Framework for Distributed Resource Management”, 1999, Cluster Computing 2, pgs. 1291-38, USA.**

Rajesh presents a matchmaking resource management framework whereby “customers and resources are all described by classified advertisements written in simple but powerful formal language that describes their attributes and allocation policy. A Matchmaker server uses a policy-independent matching operation to discover pairing” (Abstract). Specifically, “each entity in the pool sends a classad containing a description of its attributes and constraints to a matchmaker, which therefore describes the entity’s policy. The matchmaker determines the compatibility of advertising entities by checking if the constraints and preferences expressed in the respective classads are satisfied. If a match is found, the matched entities are deemed to be compatible, and the policies of both entities must have been satisfied. Thus, the matchmaker implements the policies of advertising entities as part of the matchmaking process.” (Page 130, Col.2, Paragraph 3).

Indeed, the matchmaker taught by Rejesh is only concerned with matching the constraints and preferences expressed in the classads. In particular, Rejesh fails to teach the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Consequently, the present invention is distinguished over Rejesh.

**Daniel et al., “Electronic Networking: Social and Policy Aspects of a Rapidly Growing Technology”, Electronic Networking: Social & Policy Aspects, Proc. INET’94/JENC5, pgs. 432-1-423.6**

In this paper, Daniel discusses some of the social and policy aspects arising from the growth in electronic networking. However, Daniel does not teach or suggest any

method for connecting a searcher to a target in the electronic network, and as such, the present claims are patentable over Daniel.

**Sape et al., “Distributed Match-Making”, 1988, Algorithmica, pgs. 367-391, New York, USA.**

In this article, Sape investigates the complexity of matchmaking processes in a distributed network. The approach taken is to compare the messages and storage needed (Abstract). Indeed, Sape is only concerned with the communication cost (the number of messages and storages needed) involved in matching resources in a network. This is fundamentally different from the current invention wherein matches are reported using the connection information between a search and a potential target. Therefore, the current invention is patentable over Sape.

**Somesh et al., “A Formal Treatment of Distributed Matchmaking”, Article, pgs. 457-458.**

Somesh provides formal semantics for distributed matchmaking and presents a formal correctness criterion for distributed matchmaking protocols. In addition, Somesh discloses a matchmaking operation wherein matching a requester and a target is based on the capabilities advertised by the target (Page 457, Section 2).

Though Somesh teaches a matchmaking system, he fails to disclose the following features of the current invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86, 93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Indisputably, the present invention is distinguished from Somesh.

**Sally et al., “Using Intelligent Software Agents to Query Heterogeneous Distributed Statistical Databases”, Article, pgs. 769-774**

Sally describes a “modular system of software that will enable providers of official statistics to publish their data in a unified framework, and to allow consumers of statistics to access these data in an informed manner with minimum effort” (Page 770, Paragraph 2). Specifically, the matching agents of the system “search local and remote (Metadata) libraries for matches to the user’s requirements. In general, there may be a large number of libraries providing information on data that may be relevant to the query” (Page 773, Paragraph 4).

Nowhere in Sally are the features of the present claims presented. In particular, there is no mention of (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86, 93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). As such, the present claims are patentable over Sally.

**Sue Hutchison, “Computer Matchmaker finds a Ready Clientele”, September 11, 1992, San Jose Mercury News, pg. 1B**

The article presents a computer dating service, whereby “information, devoid of last names and addresses, is swapped via computer messages among users. Vital information is exchanged only if daters are mutually interested” (Paragraph 3).

This system uses anonymous computer messages to match different users. It fails to teach or suggest the present invention wherein a match is reported using the relationship information between the searcher and the target. Hence, the present invention is patentable over Sue.

**Katia et al., “Matchmaking among Heterogeneous Agents on the Internet”, Article, 1999; Katia et al., “Dynamic Service Matchmaking Among Agents in Open Information Environments”, Article, 1999; Katia et al., “Interoperability among Heterogeneous Software Agents on the Internet”, Article, October 1998, The Robotics Institute, Carnegie Mellon University, Pittsburgh, USA.**

In these papers, Katia discusses a matchmaking process wherein a middle agent stores the capabilities information advertised by the providers, matches a request against the advertisements and returns the list of providers with compatible capabilities. In particular, Katia is concerned with the problem of performing matchmaking dynamically and over a large network. There is an obvious trade-off between the quality and efficiency of service when matchmaking on the Internet. He proposes a matchmaking protocol that balances language expression and efficiency in matching. The protocol performs both syntactic and semantic matchmaking, and allows the specification of concepts or local ontologies.

However, in his matchmaking approach, Katia fails to teach the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86, 93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Katia fails to teach each and every limitation of the present claims and as such, the present claims are patentable over Katia.

**Katia et al., “Coordination of Multiple Intelligent Software Agent”, 1996, International Journal of Cooperative Information Systems.**

Katia discusses “techniques for developing distributed and adaptive collections of information agents that coordinate to retrieve, filter and fuse information relevant to the

user, task and situation, as well as anticipate user's information needs" (Abstract). In particular, Katia discloses a "Personal Finder task agent", who finds detailed information about a visitor and a host so as to better match the visitor with the host.

However, Katia fails to teach or suggest the following features of the present invention: (1) reporting a match if the "degree of connection between a searcher and a potential target is within a connection threshold" (Claims 76, 86,93, 102, 117, 134); (2) user's information is provided according to "access control instruction" (Claims 105, 116, 128); and (3) "the search request having been developed by the searcher in response to one or more prompts suggesting amendments" (Claim 113). Consequently, Katia does not teach the present invention.

#### **Kan et al., "A Private Matchmaking Protocol", Article**

Kan introduces a private matchmaking protocol, whereby "users don't have any credentials given by other party. The only credential a user has is a secret, i.e. his wish, W, which he will use to locate and authenticate other users who have the same wish" (Section 4.1, Paragraph 3).

Clearly, the private matchmaking protocol taught by Kan is significantly different from the present claims. In particular, Kan fails to teach the following features of the present invention: (1) reporting a match if the "degree of connection between a searcher and a potential target is within a connection threshold" (Claims 76, 86,93, 102, 117, 134); (2) user's information is provided according to "access control instruction" (Claims 105, 116, 128); and (3) "the search request having been developed by the searcher in response to one or more prompts suggesting amendments" (Claim 113).

Kan fails to teach each and every element of the claims, and therefore, the present claims are distinguishable over Kan.

**Gerhard et al., “Capability Representations for Brokering: A Survey”, 1999, Article, pgs 1-70**

In this article, Gerhard reviews the representations for capabilities that facilitate brokering. In particular, Gerhard classifies the representations into (1) logic base (Page 15), (2) action base (Page 25) and (3) problem solving methods (Page 37).

However, Gerhard is unconcerned with the following features of the present invention: (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113). Therefore, the present claims are patentable over Gerhard.

**Bjorn Hermans, “Intelligent Software Agents on the Internet: an inventory of currently offered functionality in the information society & prediction of (near-) future developments” July 9, 1996, Tilburg University, Tilburg, The Netherlands, pgs. 1-88**

Bjorn discusses several software agents, one of which is the type that search through the World Wide Web to look for information which may be interesting to a user (Page 19, Paragraph 1). He further presents examples of agent applications including Open Sesame!, Hoover, Internet SoftBot and InfoAgent. Open Sesame! uses “a learning agent which observes user’s activities and learns which tasks are repeated again and again. It then offers to perform those repetitive tasks for the user automatically” (Page 22, Paragraph 2). Hoover includes a research application that is “based on the type of information the user wants, such as information on companies, people, places and markets. Hoover’s research agent will search for information based on the appropriate context” (Page 23, Paragraph 2). Internet SoftBot is an agent “that attempts to determine what the user wants and understands the contents of information services” (Page 24,

Paragraph 2). InfoAgent is able to “reason about the user’s requests and to understand what type of need he is expressing: it singles out which of the two agents in the system is able to solve the current problem and sends to it its interpretation of the query”.

It should be noted that none of the agents described by Bjorn is concerned with (1) reporting a match if the “degree of connection between a searcher and a potential target is within a connection threshold” (Claims 76, 86,93, 102, 117, 134); (2) user’s information is provided according to “access control instruction” (Claims 105, 116, 128); and (3) “the search request having been developed by the searcher in response to one or more prompts suggesting amendments” (Claim 113).

Indeed, Bjorn fails to teach each and every limitation of the present claims. Therefore, the present invention is distinguishable from Bjorn.

**Kautz et al., “Agent Amplified Communication”, Proceedings of the First International Conference on Artificial Intelligence and the 8<sup>th</sup> Innovative Applications of Artificial Intelligence Conference, Vol. 1, Aug 4-8, 1996, pp. 3-9, XP002102512, Portland, OR, USA**

Kautz proposes an agent-based framework for assisting and simplifying person-to-person communication for information gathering tasks. In his approach, the informal person-to-person network that exists within an organization is used to “referral chain” requests for expertise (Abstract). Kautz further describes that when a user formulates a query by simply giving one or more relevant keywords, “the user-agent will scan the user-contacts file and the indexed email files to look for names of people who might be able to help with this request. The user is presented with a list of such names. The names are ordered according to how frequently the keywords were mentioned in the email correspondence. By simply clicking on some of the names on the list, the user can initiate the referral chaining process. For the selected names, the query is passed on to the corresponding user agents. As we discussed earlier in general terms, when a user agent receives a request for expertise, it tries to match the request against its owner’s data files.



If there is a good match with the user-profile information, the request is passed on to its owner directly, since there is a good chance that he or she can answer the query. If there is no good match with the user-profile, the user agent generates a list of possible referrals using the email records and the user-contact file. *This list is passed back automatically to the requesting user agent, if the request originates from someone on the list of close colleagues.* If the originator of the request is not a close colleague, the user agent will contact its owner before passing back any information. Finally, if no good match is found with any of the stored records, the query is simply ignored. The user agent of the person who originally requested the information collects all the possible referrals, and can continue the process by contacting some of the suggested referrals” (Page 6, Paragraph 2; emphasis added).

It is noted that the process disclosed by Kautz uses the relationship between the requestor and the expert as a criterion for passing the referral list back to the requester. This is significantly different from the present invention because Kautz fails to teach that a match is only reported if the “degree of connection between the searcher and a potential target is within a connection threshold” (Claim 76). Specifically, Kautz fails to teach who and how the list of close colleagues is defined. In addition, Kautz fails to teach or suggest the following features in the present invention:

reporting matches to search criteria according to whether or not a *degree of connection* between a searcher and a potential target is *within a connection threshold*. (Claim 76)

reporting potential matches to search criteria so as to include information regarding *degrees of connection* between a searcher to each individual represented by the potential matches, wherein the individuals represented by the potential matches are *within a specified connection distance* from the searcher. (Claim 86)

utilizing such *verification reports in reporting matches* to search criteria established by a searcher, said matches being *within a degree of connection* between the searcher and an individual represented thereby. (Claim 93)

said matches being reported if individuals represented thereby are *within a contact threshold*. (Claim 102)

autonomously brokering connections between a searcher and a target so as to provide information regarding *inter-personal connections* between the searcher and the target according to *access control instructions* of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others. (Claim 105)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, *the search request having been developed by the searcher in response to one or more prompts suggesting amendments* which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request. (Claim 113)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding *inter-personal connections* between the searcher and the target according to *access control instructions* of the connecting entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others. (Claim 116)

autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a connection path between the searcher and the target in response to a search request submitted by the searcher; *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold*. (Claim 117)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user, each user profile having associated *access control instructions* which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile pertains. (Claim 128)

integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such *verification reports in reporting matches to search criteria established by a searcher*, said matches based in part on strengths of relationship in associated chains of connection between the searcher, potential targets and verifiers, if any. (Claim 134)

Indisputably, Kautz fails to teach each and every element of the present claims. Therefore, the present invention is patentable over Kautz.

**Slater et. al, "Information System using Human Resource Profiles", PCT International Publication Number: W0 99/39279**

Slater proposes a system comprising an information library that contains details on a number of persons to whom a request can be selectively sent. The system selects the recipients of the request base on the recipient profile. In addition, the system stores answers and other information to which subsequent request can be referred to. In particular, Slater describes that "when a query is raised on the system according to the invention, the processor of the system analyses the query and addresses the information sources held in the information library, typically accessing the sources in a sequence which may, for example, start with the system database in which will be held replies to

previously and identify the most relevant expert human resource or resources by reference to the human resource profiles. The query is then addressed to the expert human resource or resources, e.g. by e-mail or other method. The expert human resource or resources can then consider the query and answer the same and return the answer to the system for storage and transfer to the user who raised the query “ (Page 7, Paragraph 2).

Slater is clearly unconcerned with the inter-relationship between the requester and the expert resource. Indeed, Slater only suggests using the profile of the expert resource to match the request to the expert resource. This alone is sufficient to distinguish the current invention over Slater. In addition, Slater fails to teach the following features of the present invention:

reporting matches to search criteria according to whether or not a *degree of connection* between a searcher and a potential target is *within a connection threshold*. (Claim 76)

reporting potential matches to search criteria so as to include information regarding *degrees of connection* between a searcher to each individual represented by the potential matches, wherein the individuals represented by the potential matches are *within a specified connection distance* from the searcher. (Claim 86)

utilizing such *verification reports in reporting matches* to search criteria established by a searcher, said matches being *within a degree of connection* between the searcher and an individual represented thereby. (Claim 93)

said matches being reported if individuals represented thereby are *within a contact threshold*. (Claim 102)

autonomously brokering connections between a searcher and a target so as to provide information regarding *inter-personal connections* between the searcher and the target according to *access control instructions* of individuals represented by the inter-personal connections regarding levels of details of themselves and their contacts that may be shared with others. (Claim 105)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting individuals in a inter-personal connection path between the searcher and the target in response to a search request submitted by the searcher, *the search request having been developed by the searcher in response to one or more prompts suggesting amendments* which may be made to the searcher's personal profile in order to achieve objectives stated by the searcher in developing the search request. (Claim 113)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, at least one of the connecting entities being an organization having a profile that is an aggregate of one or more individual profiles of members of the organization, so as to provide information regarding *inter-personal connections* between the searcher and the target according to *access control instructions* of the connecting entities regarding levels of details of the connecting entities and contacts specified in profiles of the connecting entities that may be shared with others. (Claim 116)

autonomously brokering a connection between a searcher and a target using one or more profiles of contact lists of one or more likely connectors in a connection path between the searcher and the target in response to a search request submitted by the searcher; *wherein matches to the search request are reported only if a degree of connection between the searcher and the target is within a specified connection threshold.* (Claim 117)

autonomously brokering a connection between a searcher and a target using contact lists of one or more connecting entities in a connection path between the searcher and the target in response to a search request submitted by the searcher, each of the contact lists being a portion of a user profile of an associated user, each user profile having associated *access control instructions* which determine portions of the user profiles which may be updated in remote user profile copies maintained by individuals other than the associated user to which the user profile

pertains. (Claim 128)

integrating third party verification reports regarding user-created personal profiles with such profiles for use in a computer-implemented match-making system; and utilizing such *verification reports in reporting matches to search criteria established by a searcher*, said matches based in part on strengths of relationship in associated chains of connection between the searcher, potential targets and verifiers, if any. (Claim 134)

Unquestionably, Slater fails to teach each and every element of the present claims, and therefore, the present invention is patentable over Slater.

**(F) SUMMARY**

For at least the foregoing reasons, the claims are patentable over the references located during the above-referenced search that are deemed most closely related to the subject matter encompassed by the claims.

If there are any additional fees associated with this communication, please charge our deposit account 02-2666.

Respectfully submitted,

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Date: July 29, 2004



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